

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 2550 : 2016

(JPMA/JSA)

Sintered metal materials— Specifications

ICS 77.160

Reference number : **JIS Z 2550 : 2016 (E)**

Z 2550 : 2016

Date of Establishment: 1983-11-01

Date of Revision: 2016-09-20

Date of Public Notice in Official Gazette: 2016-09-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Metal and Inorganic
Materials

JIS Z 2550:2016, First English edition published in 2017-04

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2017

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HT/AT

PROTECTED BY COPYRIGHT

Contents

| | Page |
|----------------------------------------------------------------------------------------------------------------|------|
| Introduction..... | 1 |
| 1 Scope..... | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 2 |
| 4 Classification and symbols | 2 |
| 5 Quality | 2 |
| 5.1 Chemical composition | 2 |
| 5.2 Mechanical properties | 2 |
| 5.3 Physical properties | 2 |
| 6 Sampling method and preparing method of test pieces | 3 |
| 6.1 Sampling method | 3 |
| 6.2 Preparing method of test pieces | 3 |
| 7 Tests | 3 |
| 7.1 Chemical analysis..... | 3 |
| 7.2 Open porosity and oil content test..... | 3 |
| 7.3 Radial crushing strength test..... | 3 |
| 7.4 Tensile test..... | 4 |
| 7.5 Density test | 6 |
| 7.6 Impact test | 6 |
| 7.7 Hardness test | 6 |
| Annex A (normative) Designation system | 28 |
| Annex JA (informative) Sintered materials for structural parts | 32 |
| Annex JB (normative) Preparation of samples for chemical analysis for determination of carbon content | 33 |
| Annex JC (normative) Test method for apparent hardness | 34 |
| Annex JD (informative) Comparison table between JIS and corresponding International Standard | 36 |

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Powder Metallurgy Association (JPMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 2550:2000** is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

Sintered metal materials— Specifications

Introduction

This Japanese Industrial Standard has been prepared based on the third edition of **ISO 5755** published in 2012 with some modifications of the technical contents.

The portions given sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JD.

1 Scope

This Standard specifies the requirements for the chemical composition, mechanical and physical properties of sintered metal materials (hereafter referred to as materials) used for bearings and structural parts.

NOTE 1 When selecting materials, it should be taken into account that the properties depend not only on the chemical composition and density, but also on the production methods. The properties of sintered materials giving satisfactory service in particular applications may not necessarily be the same as those of wrought or cast materials that might otherwise be used. Therefore, selecting materials should be as agreed between the purchaser and manufacturer.

NOTE 2 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 5755:2012 *Sintered metal materials—Specifications* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS G 1211-3 *Iron and steel—Determination of carbon content—Part 3: Infrared absorption method after combustion*

JIS Z 2241 *Metallic materials—Tensile testing—Method of test at room temperature*

JIS Z 2242 *Method for Charpy pendulum impact test of metallic materials*

JIS Z 2244 *Vickers hardness test—Test method*

JIS Z 2245 *Rockwell hardness test—Test method*

JIS Z 2500 *Powder metallurgy—Vocabulary*